

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
16 June 2005 (16.06.2005)

PCT

(10) International Publication Number  
**WO 2005/053641 A1**

(51) International Patent Classification<sup>7</sup>: **A61K 9/00**, 31/16

(21) International Application Number:  
PCT/IB2004/052616

(22) International Filing Date: 1 December 2004 (01.12.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
2003/9481 5 December 2003 (05.12.2003) ZA

(71) Applicant (for all designated States except US): **FRANGOLD HOLDINGS LIMITED [ZA/ZA]**; 6th Floor, Benstra Building, 473B Church Street Arcadia, 0083 Pretoria (ZA).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **VAN ROOYEN,**

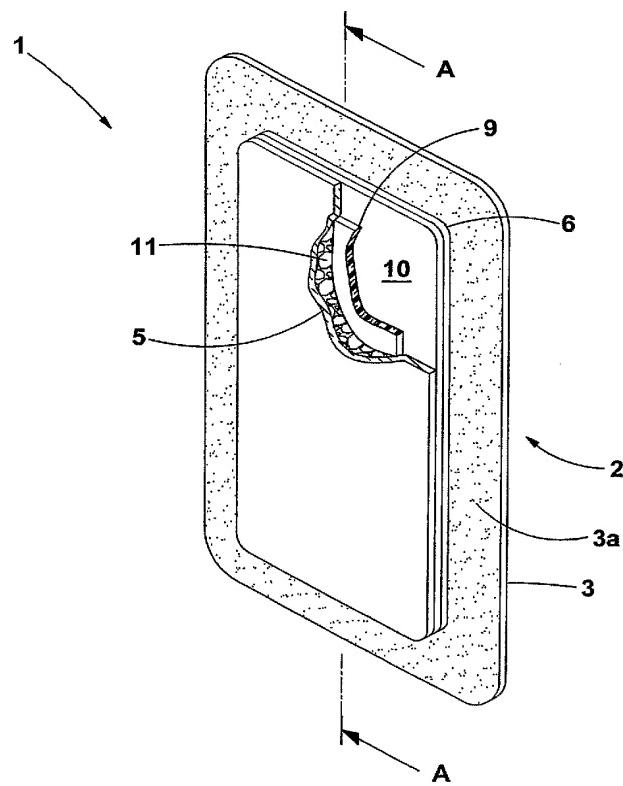
Quinton [NA/NA]; 29 Hopewell, Windhoek 9000 (NA). **VERMAAK, Salmon, Johannes [NA/NA]**; 8 Amosnet, Windhoek 9000 (NA). **SCHILLACK, Volker, Reinhard [ZA/ZA]**; 872-28th Avenue, Rietfontein, 0084 Pretoria (ZA). **CRONJE, Johannes [ZA/ZA]**; 2 Stefan Oord, Airport Avenue, Doornpoort, 0017 Pretoria (ZA).

(74) Agent: **D M KISCH INC**; P O Box 781218, 2146 Sandton (ZA).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

[Continued on next page]

(54) Title: PATCH



(57) Abstract: A patch device adapted for use in the transdermal administration to a patient of a composition including, or consisting of, a selected irritating substance, preferably dimethylformamide or DMF, the patch consisting of a layered construct adapted to be adhered to the skin of a patient and defining a depot cavity for the composition to be administered between a proximal layer and a distal layer thereof, which proximal layer is adapted in use to be located in intimate contact with the skin of the patient and which distal layer is in use disposed on the outer side thereof, the distal layer being characterised in that it is substantially impervious to the composition to be administered, and the proximal layer being characterised in that it is partially permeable to that composition, so that in use the composition may be disposed in the cavity and permeate from there through the proximal layer to be absorbed through the skin into the body of the patient, the proximal layer being further characterised in that its permeability to the irritating substance or component of such composition is less than the permeability of the patients skin to such irritating substance.

WO 2005/053641 A1



- (84) **Designated States** (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

**Published:**

— *with international search report*